In the Claims:

1-42. **(CANCELLED)**.

43. **(CURRENTLY AMENDED)** A method of forming an oxygen sensor that includes an internal cavity and a diffusion hole, said diffusion hole providing a passageway between said internal cavity and outside of said sensor, the ~~in a fired ceramic which~~ method ~~comprises~~ comprising:

~~(i)~~ forming a green ceramic structure from an intimate mixture of a powder of ~~the~~ ceramic and a binder, wherein the structure includes an oxygen ion conductor and further comprises a plurality of walls that together define said internal cavity;

incorporating ~~which structure incorporates~~ at least one organic fibre or other organic element into said structure so that the at least one fibre or other organic element extends from said internal cavity through a said wall ~~passing from one side~~ of the ceramic structure to the outside of said sensor ~~other~~ in a straight or non-straight path;

positioning a porous electrode on a surface of said oxygen ion conductor that faces said cavity, the arrangement being such that the oxygen ion conductor forms an electrolyte of a sensor element when sandwiched between said porous electrode and a second electrode; and

~~(ii)~~ firing the green ceramic structure at an elevated temperature to cure the ceramic and to destroy the binder and the organic fibre or other organic element, thereby providing said sensor with a diffusion hole that forms a passageway between the internal cavity and outside of said sensor.

44. **(PREVIOUSLY PRESENTED)** A method according to claim 43 in which the binder is a water-soluble or water-swellable polymer.

45. **(CURRENTLY AMENDED)** A method according to claim 43 ~~in which, where~~ wherein a fibre is employed and ~~the~~ said diffusion hole has a diameter ~~of the hole~~, after firing, that is greater than 10 microns.

46. (**CURRENTLY AMENDED**) A method according to claim 43 wherein ~~in which, where~~ a fibre is employed~~,~~ and ~~the~~ said diffusion hole has a ~~the~~ diameter~~,~~ ~~of the hole~~ after firing, that is in the range 25 to 200 microns.

47. (**PREVIOUSLY PRESENTED**) A method according to claim 43 wherein said firing step comprises firing the green structure at a temperature in excess of 1000°C.

48. (**PREVIOUSLY PRESENTED**) A method according to claim 43 in which the ceramic is an oxygen-ion conductor.

49. (**PREVIOUSLY PRESENTED**) A method according to claim 48 in which the oxygen-ion conductor is a 4-valent metal oxide stabilised with a three- or two-valent metal oxide.

50. (**PREVIOUSLY PRESENTED**) A method according to claim 48 in which the 4-valent metal oxide is selected from zirconium dioxide, cerium dioxide and hafnium dioxide.

51. (**PREVIOUSLY PRESENTED**) A method according to claim 49 in which the 3-valent metal oxide is yttria.

52. (**PREVIOUSLY PRESENTED**) A method according to claim 50 in which the oxygen-ion conductor is zirconium dioxide stabilised with yttria.

53. (**CURRENTLY AMENDED**) A method according to claim 49 ~~in which~~ wherein the ~~crystalline form of the~~ oxygen-ion-conducting ceramic has a ~~is~~ cubic crystalline form.

54 - 67. (**CANCELLED**)

68. (**NEW**) A method according to Claim 43, wherein the organic element has a uniform or non-uniform cross-section.

69. (**NEW**) A method according to Claim 43, wherein said structure comprises a cylinder.

70. (**NEW**) A method according to Claim 69, wherein said structure has a circular, rectangular, square or elliptical cross-section.

71. (**NEW**) A method according to Claim 43, wherein said electrode is made of porous platinum or a porous platinum/oxygen-ion-conductor cermet.

72. (**NEW**) A method according to Claim 71, wherein said porous electrode is of a porous platinum / oxygen-ion-conductor cermet in which the oxygen-ion-conductor of said cermet is of the same composition as that used in the green ceramic to form the electrolyte of the sensor element.

73. (**NEW**) A method according to Claim 43 wherein the structure is cylindrical and formed of an oxygen-ion-conducting ceramic with said diffusion hole through an end or side of the cylindrical structure.

74. (**NEW**) A method according to Claim 43, wherein said organic element comprises an organic fibre.